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ABSTRACT

A computer program was implemented as an aid to improve third graders' spelling word mastery. The program focused on helping 15 medium-ability students from 3 classrooms improve their spelling scores and proficiency. During the 10-week project each student spent 10 minutes a day working on a computer using the computer software "Guess That Word" (1982). Results collected through pre- and posttests indicated that students' spelling scores improved. (Four tables of data are included. Appendixes include: a teacher pre-survey, parent questionnaire, administrative interview questionnaire, standardized test results, weekly spelling test words, teacher checklist on students' test results, and teacher post-survey.) (SR)

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A COMPUTER APPROACH TO IMPROVE SPELLING WORD MASTERY WITH THIRD GRADERS

BY

BEVERLY F. HALL

A Practicum Report
submitted to the Faculty of the Center for the Advancement of
Education of Nova University in partial fulfillment of the
requirements for the degree of Master of Science

SEPTEMBER 1986

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Beverly F. Hall

ABSTRACT

A Computer Approach to Improve Spelling Word Mastery with Third Graders
Hall, Beverly F., 1985: Practicum Report, Nova University, Center for the Advancement of Education
Descriptors: Grade 3/Primary Education/Computer-Assisted Instruction/ Computer-Managed Instruction/Spelling DE/Spelling Instruction/ Vocabulary Development/Curriculum Development/Teaching Methods/ Pretests/Posttests

A computer program was implemented by the writer as an aid to improve third graders' spelling word mastery. The program's aims were to help medium-ability third graders improve spelling scores and proficiency.

Following observation and weekly spelling test scores, three third grade teachers, which includes the writer, chose five medium-ability students from their rooms to be involved in the ten-week project. Evaluation of the project by the students' pre- and posttest results and the teacher post-survey concluded that the computer aided in the improvement of students' spelling scores and spelling proficiency. The computer program "Guess That Word" (1982) was recommended for use school wide.
Appendices include: teacher pre-survey, parent questionnaire, administrative interview questionnaire, standardized test results, weekly spelling test words, teacher checklist on students' test results, and teacher post-survey.
Graphs include: teacher/student results graphs.

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Mrs. Hall approached me with her project "A Computer Approach to Improve Spelling Word Mastery with Third Graders." during the fall term of 1985. She explained to me in detail an overview of her project and continued to keep me well informed throughout the duration of the project. I'm satisfied the project was carried out in a very professional manner.

Practicum Title A Computer Approach to Improve Spelling Word Mastery with Third Graders

Student's Name Beverly F. Hall

Program Site Tampa Date August 14, 1986

Observer's Name Philip C. O'Brien
(please print ----------and sign)

Observer's position Principal - Ling St. Elem.

CHAPTER I

PURPOSE

The implementation of this practicum occurred in an elementary school setting at the third grade level. The school is located in central Florida. At the beginning of this practicum project, there was a total population of 502 students, kindergarten through sixth grade, with 31 teachers and five teacher aides. There were two full-time Chapter I classes, with each sharing an aide. There were two learning disability classes (LD), with one being full time and the other part time. Each shared an aide. The student population varied from six to ten in the full-time learning disability class, and from fifteen to 25 in the part-time learning disability class.

During this practicum project, there was a total population increase from 502 students to 536 students. Some of the regular classes were ranging 28 to 30 students. There were three kindergarten classes with one full-time teacher aide. The kindergarten classes were averaging 28 students each. There were four first grade classes. First grade was averaging 25 students each. Second grade had three classes and averaged 25 students each. Third grade had three classes and averaged 23 students each. First through third grades did not have an aide. Fourth grade had two classes and averaged 29 students each. Fifth grade had three classes and averaged 25 students each. Sixth grade had three classes and averaged 23 students each. Fourth through sixth grades had an aide 30 minutes each day.

The staff included one administrator, one administrative assistant, one music teacher, one part-time strings teacher, one media specialist, one physical education teacher (with an aide), one primary resource teacher (PREP), one speech teacher, one bilingual teacher, one guidance counselor, one full-time secretary, one part-time secretary, six lunchroom personnel, and three full-time janitors.

In previous years, the primary grades, first through third other than kindergarten, had an aide who came in the classroom for 30 minutes each day. The aide assisted the teacher in reinforcing previously-learned skills to small groups of students who experienced difficulty. This year there was not an aide to assist the teacher.

Many families were in a state of transition because both parents had to work. Students at this school were from middle-class Caucasian families who live in single-parent settings. Many times both parents were employed outside of the home; therefore, there was a lack of parent volunteers. There were also many students who transferred in and out of this school.

There was an overall school problem with spelling proficiency, documented by teachers, parents, and administrators (Appendices A, B, C). The need for spelling proficiency was evidenced by poor spelling skills in all phases of classroom assignments through a survey (Appendices A, B) filled out by classroom teachers and a random sampling of parents of third graders. Interviews with the school administrators also addressed the problem (Appendix C).

Kindergarten does not teach spelling. As J. Richard Gentry points out, "Learning to spell must be treated as a complex developmental process that begins at the preschool and primary school levels. As teachers observe spelling skills unfolding, they must engage pupils in the kinds of cognitive activity that leads to spelling competency." Students do not begin spelling instruction until the first grade.

Overall standardized test scores in spelling are low (Appendix D). The administrator voiced concern over these low scores. Not only are standardized test scores in spelling low, but spelling in everyday and weekly assignments, tests, and creative writing tasks have shown a great lacking in proficiency, mastery, and recall. The administrator had expressed the need for spelling proficiency at faculty meetings and stated something needed to be done to eliminate this problem. This was where the computer served as the much-needed aid in spelling proficiency.

Teachers noted, as prime causes for the lack of spelling proficiency, class size, lack of teacher instruction time, lack of discussion between grade levels on spelling performance, and the spelling textbook. They supported computer-assisted spelling instruction, although many did not use the computer to assist in spelling. Many felt the need for a full-time classroom computer if the money were available (Appendix A).

Parents felt their children did poorly with spelling on creative writing assignments as well as other subjects. Parents felt the

computer would be a positive step in helping spelling proficiency, and cited the need for more computer-assisted instruction in spelling (Appendix B).

Through the parent questionnaire, the writer found most parents spent 30 minutes to no time at all in helping their child with spelling. The writer noticed a huge discrepancy in how the parents felt and how the teachers felt about the school's spelling proficiency (Appendices A, B).

Question interviews with the school's administrators revealed several concerns. Teachers did not plan any definite instruction time involving the computer, and teachers need more training in operating the computer. The computer, though its use was rotated each week among grade levels, was used only half the time, if at all. Objectives or purposes for the use of the computer were not revealed to the students. There was not any transfer of previously-learned words from one grade level to the next. Simple sight words were spelled incorrectly on written assignments. Overall spelling test scores were low on the Science Research Associates Test (SRA) and the Iowa Test of Basic Skills (ITBS) (Appendix D). There needs to be more continuity in the spelling curriculum (Appendix C). The questionnaires and surveys from teachers, parents, and administrators indicated there was a need for spelling proficiency, and the computer was a readily-available aid for each grade level. Therefore, the aforementioned evidence presented has demonstrated a discrepancy between what spelling scores and spelling proficiency presently are, and what they should have been.

In this practicum, the following outcome objectives were addressed:

1. After spending ten minutes each day with a computer and some teacher-assisted spelling instruction, each medium-ability third grade student will score 85 or better on a written spelling test each week for ten weeks.
2. After ten weeks of ten minutes with a computer and teacher-assisted spelling instruction, medium-ability third graders' spelling proficiency will increase to 85 percent or better, as measured by weekly tests.

(These outcomes will be reviewed in further detail with the results section of this report.)

CHAPTER II

RESEARCH

The problem of spelling proficiency has been cited as a concern of teachers, parents, and administrators (Appendices A,B,C). This problem needs to be remedied or solved. The problem may have arisen out of the lack of teacher time, poor spelling textbooks, large class size (Appendices A,B), more emphasis on the basics (Appendix C), or lack of teacher aides.

In any case, computer-assisted instruction serves as an aid to the teacher because students can use the computer by themselves. As pointed out in the Report of the Commissioner's Advisory Committee on Instructional Computing (1980):

> Both computerized materials and instructional methods are helping provide individualized learning environments for a broad spectrum of content area learning levels. Consistent evidence from the research shows that computer-assisted instruction is at least as effective as traditional methods, and is often more effective--especially when used as a supplement to regular instruciton.

The computer is a motivator because it is unique and different. According to the above-mentioned report:

> There is general support in the research view that computerized methods of all types promote more positive student attitudes toward both the content and the traditional approach. The ability of supplying private, tailored, and immediate feedback to the student appears to be largely responsible for increasing the student's motivation to learn.

The computer can provide a challenge and assist the teacher in working with high-ability as well as low-ability students in spelling. For the high-ability students, again quoting the above report,

"Computer-based, individualized learning can provide a 'teacher' with endless patience and unlimited memory concerning each student's specific learning needs."

The computer involves tactile as well as visual learning processes for visual and kinestic learners. According to John McLeon (1980), "The computer can be valuable as a vehicle for learning by doing."

In the near future, students will be required to be computer literate on the Florida Statewide Assessment Test. As stated in the Computer Education Curriculum Guide for Polk County Public Schools (1985):

> An important major issue in the state of Florida is the targeting of computer skills toward minimum student performance standards. Computer literacy as a standard will be required for all students who seek standard grade promotion and/or diploma, using the SSAT I test at grades 3, 5, 8, and 10.

Once the task of learning how the computer and its programs are to be used is accomplished, it can provide ongoing instruction with different measures of difficulty. As stated by Ernest Balajthy (1984), "Students work and learn at different rates. The computer is ideally suited to match rate of presentation to each individual student."

The programs can be adapted to fit the intellectual capabilities of high-ability students as well as prolonging the interest and learning of low-ability students. As reported in the Commissioner's Advisory Committee on Instructional Computing (1980):

> Computers can help accelerated learners by offering a powerful intent with which the student can explore all content areas, and provides possible self-paced methods for learners to acquire knowledge and skills. Both drill and practice and management capabilities

> can help with the learning problems presented by many kinds of learning disabilities. Computer-assisted instruction is able to provide constant patience, reinforcement, and stimulation required for these students.

Transfer students can get assistance from the computer in skills they may have missed during moving from one school to another. The Commissioner's Advisory Committee on Instructional Computing (1980) states:

> There are many students who, for social and personal reaons, move frequently from school to school. These students may have no learning difficulty other than simply getting access to material which they missed when transferring to a school with a different curriculum structure.

In order to gain support in minimizing spelling problems, the writer has sought input from all those involved, either directly or indirectly, in the practicum project. Many other avenues to correct the problem with spelling such as closer grading, requiring spelling corrections, sounding out words, more use of dictionaries and glossaries, student helpers, doing papers over, and making parents, teachers, and administrators more aware of the spelling problem have failed.

The use of computer-aided spelling instruction for third grade was chosen by the writer due to lack of teacher instruction time, the availability of computers, lack of an aide for third grade, low SRA and ITBS spelling scores, lack of parental help with spelling, and lack of transfer of previously-learned spelling words from one grade level to the next. There was also the concern over spelling proficiency by teachers, parents, and administrators (Appendices A,B,C,D).

Computers promote high interest; they do not provide negative feedback. As pointed out by Ernest Balajthy (1984), "Computers are infinitely patient and allow students to take their time, providing as much practice as the students need." He also pointed out:

> Another possible benefit of computerized drill instruction is that there is very little ego involvement on the part of the children when being corrected by a computer. They need not worry about teacher's frowns or the giggles of classmates--the computer simply informs them as to whether they are correct or incorrect.

Computers are easy to operate and can be used independently. As stated by Gladene Robertson (1978), "Even very young children can learn to 'log on' and 'log off' the terminal and, because the child's responses are immediately reinforced or corrected, teacher supervision is minimal."

As indicated by Holly O'Donnell (1982) in her review of the report "More Hands for Teachers," by the Florida Department of Education:

> The report identifies several special-needs populations who with instructional computing may never receive the attention they deserve--students requiring remediation in basic skills, students with learning disabilities, students in low-population courses, accelerated learners, and transfer students. Applications of computer-managed instruction (CMI) and computer-assisted instruction (CAI) offer logical solutions to problems these and other student populations bring to school.

Computers can serve as motivators. They involve kinesthetic and visual learning processes; plus, many young children are fascinated by them. Since computer skills will be tested in the near future on the Statewide Assessment Test (SAT), as stated in The Computer Education Curriculum Guide for Polk County Public Schools (1985),

students need to know how to operate a computer.

Not only will students be learning how to use a computer more within the project, but they will be improving their spelling proficiency as well. Teachers also have been instructed to program so they can better use a computer. As Demshock pointed out:

> Personnel can be quickly trained to develop materials and operate equipment. Teachers or teacher-aides can be quickly trained to operate computer-assisted instruction terminals. They can work with someone with prior experience whereby they can quickly learn the author language and the necessary programming and coding skills.

Computers, as indicated by the surveys and questionnaires, are a likable, available, and well-chosen aid to assist in spelling proficiency.

CHAPTER III

METHOD

After observation and weekly spelling test scores, three third grade teachers, which included the writer, chose five medium-ability students from their rooms to be involved in the ten-week project. The ten-week project involved fifteen medium-ability students.

All three teachers involved in the project had access to a computer in their classroom for ten weeks. They were shown how to use the computer software "Guess That Word" (1982) by the writer. The teachers then, in turn, showed the students involved how to use the software. After the first two weeks of using the software and becoming familiar with it, the students experienced very little difficulty.

Normally, each classroom had access to a computer on a rotating basis once every three weeks. Teachers alternated the use of the computer, since there was only one per grade level. Fortunately, the writer borrowed two other computers from other grade levels for the ten-week project. One of the computers broke down, but the writer borrowed one from another grade level; also, the software did not work correctly and spelling words had to be reentered for one week.

Each student spent ten minutes a day working on the computer. The work consisted of weekly spelling words coordinated from the third grade Rand McNally Spelling Text, Lessons 7-16 (1980) (Appendix E). Other commonly-misspelled words were added by the

writer. The weekly spelling words, plus some commonly-misspelled words, were entered each week by the writer in the computer software.

In the software "Guess That Word" (1982), spelling words are typed on proper data lines. Many lists can be entered as long as the list is preceded by a number identifying the list. All entries are separated by commas, and an arrow pointing up concludes each list.

As requested by the computer, the student types in the number of the desired word list. The computer randomly selects a word from the list and prints a row of green boxes that is the same length as the chosen word. The student then has three choices--either try to guess the entire word, guess a single letter, or ask the computer to reveal a letter. If a student tries to guess the word, 100 points are won if the guess is right, and five points are lost if the guess is wrong. If the student guesses a letter, the cost of the guess is one point. If the student guesses correctly, all letters in the word are revealed. If the student asks the computer to show a letter, only one letter is revealed even though more than one such letter may be in the word. The cost of this is two points. When the student finally guesses the word, the computer summarizes the results on an ongoing basis. This includes the average score per word and a list of the specific words presented by the computer.

The writer requested each student to guess a single letter, preferably a vowel first. Students were requested not to ask the computer to supply a letter.

The weekly spelling list was used by the students the first two days. For the last three days, students were not allowed to view the spelling list. Only if the students were having difficulty guessing the word were they allowed to view the spelling list.

A spelling pretest was given on Monday. The teacher called out the words and the students wrote them down. Teachers recorded those medium-ability students' pretest scores involved in the project. A spelling posttest was given on Friday. Again, teachers recorded those medium-ability students' posttest scores involved in the project. The spelling lists and tests consisted of between 18-24 words taken from the third grade Rand McNally Spelling Text, Lessons 7-16 (1980) (Appendix E).

Spelling tests, which were given each week, determined if the computer-aided instruction was having any effect on spelling proficiency or spelling test scores. Each teacher had a spelling checklist for each week (Appendix F). They recorded the students' names, pretest and posttest scores. A day-by-day log was kept by each teacher on student progress.

The writer remains in agreement with Demshock (1968): "Initial use of the program will be limited to one grade level so that management procedures can be developed into a smoothly-operating system." During implementation, the writer gave personal interviews to teachers involved in the project to note its effectiveness.

CHAPTER IV

RESULTS

The evaluation, for students involved in the project, was the use of pre- and posttest scores each week as recorded by the teachers for ten weeks. Evaluations of this project consisted of the use of pre- and post-surveys plus personal interviews from the teachers directly involved.

The post-survey (Appendix G) was completed by the third grade teachers only after ten weeks of implementation. The results of the final evaluative data post-survey (Appendix G) was compared to the initial data pre-survey (Appendix A) to determine if the criteria stated in the objectives proved success or failure.

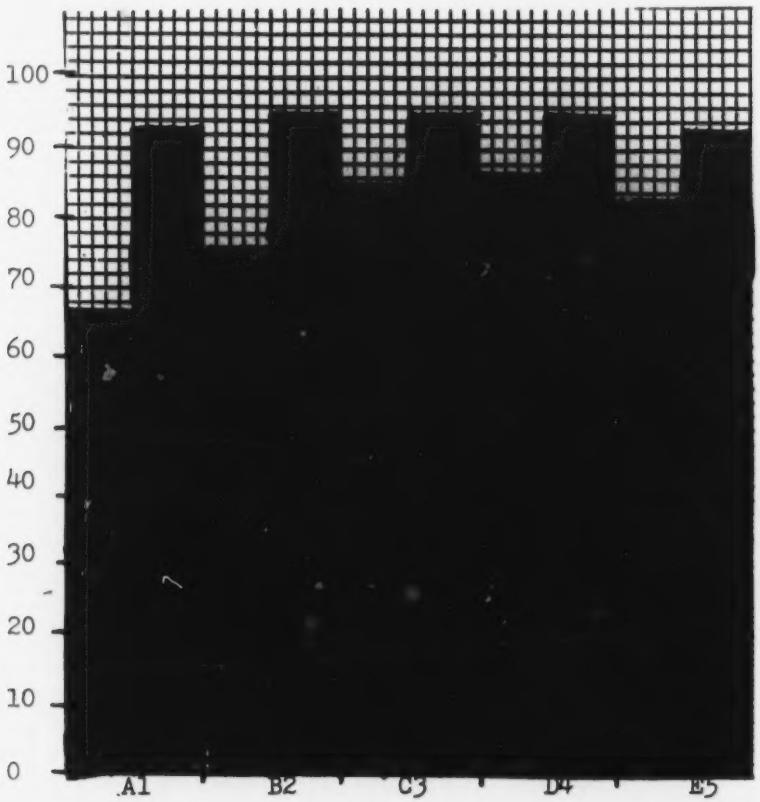
During implementation, feedback from the teachers on spelling pre- and posttest scores and mid-course interviews helped provide necessary changes. The monitoring of the practicum project helped to determine what positive or negative effect the project was having on its achievement.

Though some spelling lessons were more difficult because of the words and the number of words involved which, in turn, affected student scores, the outcome of the project was still successful.

Also, due to some holiday programs near the completion of the project in December, some student scores were affected, but progress was still made.

Following the ten-week implementation period, the information collected through the use of pre- and posttests yielded the following results, submitted in the form of graphs.

Combined Scores of Students
Teacher I

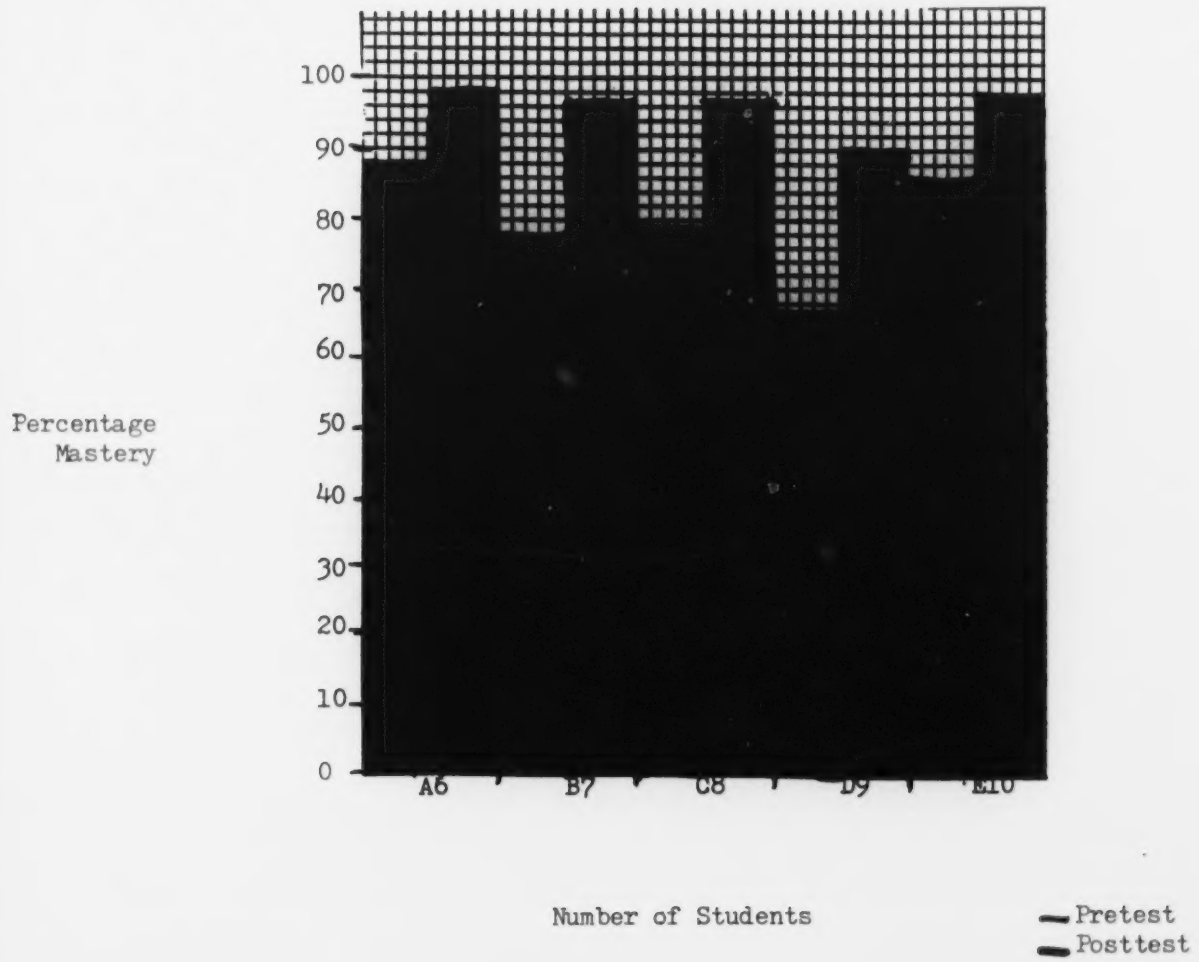


Percentage Mastery

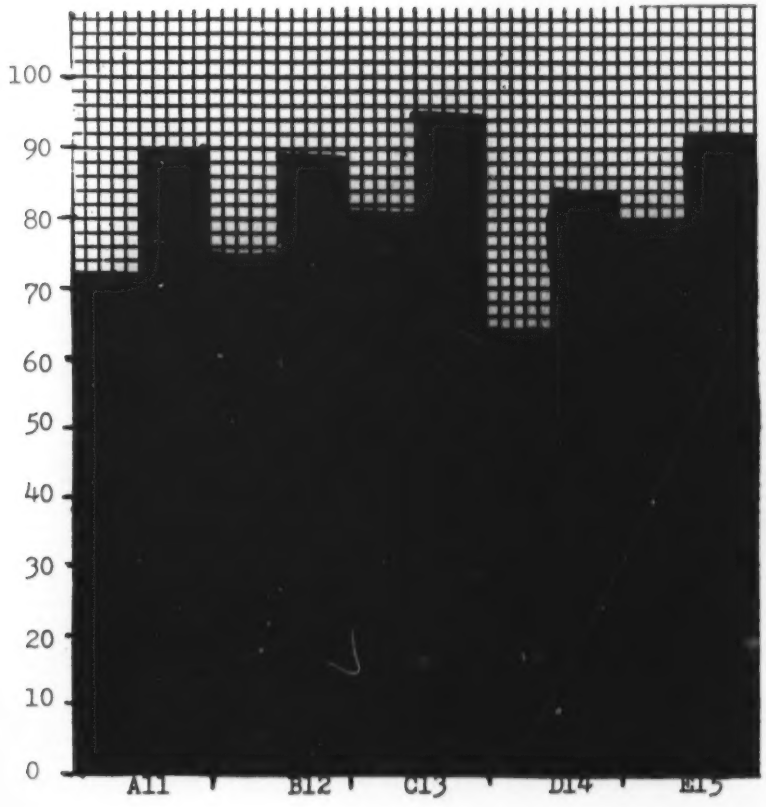
Number of Students

Pretest
Posttest

Combined Scores of Students
Teacher II



Combined Scores of Students
Teacher III

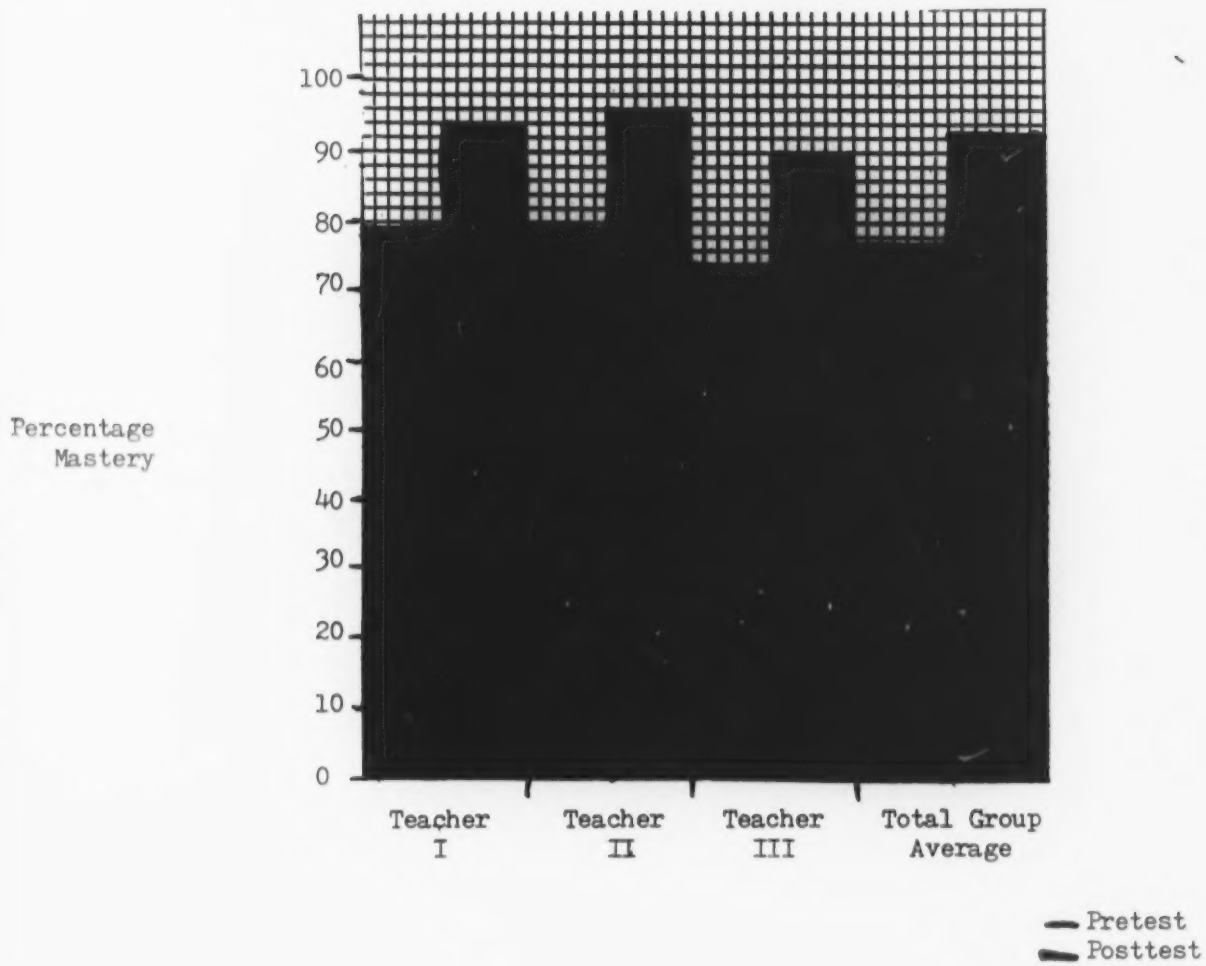


Percentage Mastery

Number of Students

Pretest
Posttest

Group Averages by Teacher



It can be seen from the preceding graphs that the overall success of the project in terms of pre- and posttest student mastery has been successful. The exception being one student who fell below the projected objectives by just 1 percent. The cause may have been brought about by the difficulties experienced by the students mentioned previously.

The writer's expectations have been met. The success in the implementation of the project proved computer-aided instruction can improve spelling proficiency of third graders.

CHAPTER V

RECOMMENDATIONS

The results of the project will be shared with all teachers, parents, and administrators who participated directly through a survey, questionnaire, or to those who actually administered the project. The project data will be available in the writer's school library to those teachers, parents, and administrators who would like to read all about it. "Guess That Word" (1982) software is available to those teachers, parents, and administrators who would like to purchase it through Micro-Ed, Inc. (see page 21), either to use in the classroom, at school, or at home to assist students or their child in spelling.

The writer will continue to use the software "Guess That Word" (1982) in the classroom to aid in spelling proficiency. All students will learn how to use the software "Guess That Word" (1982). The writer's hopes are that teachers will use this software based on the results of this project. Student computer time, considered too short in the computer project by the teacher post-survey (Appendix G), will be lengthened.

With the proven success of this practicum project, the computer program "Guess That Word" (1982) was recommended for use school wide. The school's administrator recommended and will make available permanent classroom computers for teachers to use with students.

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APPENDICES

APPENDIX A

TEACHER PRE-SURVEY

Twenty-three teachers were given the pre-survey to fill out. Twenty-one teachers returned the pre-survey forms to the writer. Following are the results:

1. Do you think the spelling textbook you presently use is a good teaching tool?

Yes	No	Doesn't Apply
11	6	2

2. What grade do you teach?

K	1	2	3	4	5	6	Chapter I
2	3	3	3	1	3	3	1

3. Do you think everyone should use the same spelling series?

Yes	No
12	7

4. How much time do you spend on spelling each day?

2 hours	1 hour	45 min.	30 min.	15-20 min.	15 min.	Doesn't apply
0	0	3	11	2	1	2

5. Do you check spelling proficiency in all subject areas?

Yes	No	Sometimes	Doesn't apply
12	3	2	2

6. Do you think spelling proficiency is a problem in our school?

Yes	No	Don't Know	Doesn't apply
15	1	1	2

7. What percentage of your class passes a weekly spelling test?

100%	95%	90%	85%	80%	75%	70%	65%	or less	No answer
4	4	4	2	2	0	0	0	0	1

Doesn't apply
2

8. How well do your students spell in other subject areas beside spelling?

Excellent	Good	Fair	Poor	No answer	Doesn't apply
0	3	10	3	1	2

9. If a student needs help to spell a word during an assignment, where do they turn for help?

Teacher	Dictionary	Encyclopedia	Fellow student	Guess
15	12	0	4	4

Glossary	Doesn't apply	Other
3	2	Words posted around the room; sound out the word

10. Do you think class size may have any effect on spelling proficiency?

Yes	No	Doesn't apply
13	5	1

11. Do you think there is enough teacher discussion between grade levels on student spelling performance?

Yes	No	No answer	Doesn't apply
3	14	1	2

12. How much time do you think your students' parents help their child with spelling each week?

4 hours or more	3 hours	2 hours	1 hour
0	0	0	3

30 min.	15 min.	15 min. to none at all	No answer	Doesn't apply
6	5	1	2	2

13. Do you use a computer to aid in spelling proficiency?

Yes	No	Doesn't apply
5	12	2

14. If you answered yes to question 13, how much time is spent on this task?

1 hour	30 min.	15 min.	10 min.	5 min.	No time at all	No answer
0	2	1	2	0	0	12

15. Do the students in your room know the purpose for using the computer?

Yes	No	No answer	Doesn't apply
13	0	4	2

16. Do you think a permanent computer in your room could help aid in spelling proficiency?

Yes	No	Doesn't apply
15	2	2

17. If you had a permanent computer in your room, how much time would be spent with spelling proficiency?

1 hour	30 min.	15 min.	10 min.	5 min.	Not sure
2	6	5	1	2	1

18. Do you think lack of teacher instruction time may account for some lack in spelling proficiency?

Yes	No	No answer	Doesn't apply
11	6	1	1

APPENDIX B

PARENT QUESTIONNAIRE

Thirty questionnaires were sent out randomly to 30 third-grade students' parents. Ten parents from each of the three third-grade classes were chosen. Twenty-six out of the 30 came back.

"Due to a school concern over spelling proficiency, please fill out completely and return this with your child as soon as possible."

Following are the replies:

1. How many hours or minutes each day do you spend with your child on spelling?

4 or more hours	3 hours	2 hours	1 hour	1 hour to 30 min.
0	0	0	0	1

30 min.	15 min.	Once a week	Help all we can	No time at all
10	2	2	1	8

Doesn't bring home book
1

2. Does your child seem to have difficulty on everyday spelling assignments?

Yes	No	Yes and No
3	20	1

3. How well does your child do on weekly spelling tests?

Excellent	Good	Fair	Poor
10	10	5	1

4. Do you think your child's classroom teacher needs to spend more time on spelling?

Yes	No	Don't know	No comment
5	17	3	1

5. How do you rate your child's spelling assignments?

Excellent	Good	Fair	Fair to Poor	Poor	Don't know
6	13	4	1	0	1

Needs more difficulty
1

6. How do you rate your child's spelling textbook?

Excellent	Good	Fair	Poor	No comment	Haven't seen textbook
4	14	4	0	2	2

7. Do you think the classroom teacher's spelling assignments are helping your child's spelling proficiency?

Yes	No	Needs more difficulty	No comment
22	2	1	1

8. How well does your child do on creative writing assignments with his/her spelling?

Excellent	Good	Fair	Poor	No comment
3	11	10	1	1

9. How well does your child do in other subjects with his/her spelling?

Excellent	Good	Fair	Fair to poor	Poor	No comment
4	11	8	1	1	1

10. Does your child have a computer at home?

Yes	No
4	22

11. If you answered yes to question 10, does your child work with spelling on the computer?

Yes	No answer
2	24

12. Do you think permanent computers in every classroom would be one way to help improve your child's spelling proficiency?

Yes	No
23	3

13. Do you think the classroom teacher needs to spend more time working with your child on the computer with spelling?

Yes	No	Yes and no	No comment	Don't know
14	7	1	2	2

APPENDIX C

ADMINISTRATIVE INTERVIEW QUESTIONNAIRE

1. Do you think spelling proficiency is a problem in this school? If so, why?

   Principal: Test scores in spelling are down. There is no transfer of previously-learned spelling words from one grade level to the next. Simple sight words are commonly missed on assignments.

   Curriculum Assistant: Yes, there is not enough emphasis placed on spelling. Teachers should expect good spelling in all subject areas.

2. What could be done to eliminate this situation?

   Principal: I am not sure.

   Curriculum Assistant: Establish a more complete spelling program in schools. More time should be spent on spelling.

3. Do you think teachers are doing a good job of teaching spelling, or should some change their way of presenting spelling?

   Principal: Some are doing a good job; others need to improve. Some teachers just have them memorize the words and have a test on Friday.

   Curriculum Assistant: Some should change the way they teach spelling.

4. Do you think the spelling textbook is a good one?

   Principal: It's okay.

   Curriculum Assistant: No, it's too easy.

5. Do you think everyone should have the same spelling textbook?

   Principal: Yes, it promotes continuity.

   Curriculum Assistant: Yes, the spelling series should be consistent not only in this school, but also in the entire county because of students transferring.

6. Are teachers spending enough time on spelling, or are there too many extracurricular activities going on?

   Principal: No, overall it probably affects it because there isn't enough time spent on spelling for learning to be effective.

   Curriculum Assistant: No, too much time is being spent on reading, whereas spelling and writing have very little emphasis.

7. Is there enough parental help and support at home with studying spelling?

   Principal: No

   Curriculum Assistant: No

8. Do you think computer-aided spelling instruction may help spelling proficiency?

   Principal: Yes

   Curriculum Assistant: Yes, it's another teaching strategy. It promotes interest, independent learning, opportunity to correct mistakes, no peer pressure, and may be used at any time.

9. Do you think teachers use the computer enough to aid in spelling proficiency, if at all?

   Principal: No, very few use it.

   Curriculum Assistant: No, not at all.

10. If funds are available, do you think computers in every classroom would be a good idea?

    Principal: Yes, if the staff was trained on how to use them and was also highly-motivated. Some teachers are reluctant to use them because they are not trained.

    Curriculum Assistant: Yes

APPENDIX D

STANDARDIZED TEST RESULTS IN SPELLING

NATIONAL PERCENTILE RANKS:

SCIENCE RESEARCH ASSOCIATES (SRA)

Grades	1982	1983	1984
K	Not tested at all		
1	Not tested in spelling		
2	67%	68%	70%
3	60%	74%	62%
4	52%	60%	54%
5	57%	69%	60%
6	70%	71%	61%

IOWA TEST OF BASIC SKILLS (ITBS)
(1985 ONLY)

Grades	
K	Not tested at all
1	Not tested in spelling
2	88%
3	87%
4	57%
5	57%
6	66%

APPENDIX E

WEEKLY SPELLING TEST WORDS

Weekly lists of spelling and challenge words to be used for the project. This is for Lessons 7-16 to be used starting the week of October 7 and continued through the week of December 16. The week of November 25 will not be used for this practicum project due to Thanksgiving holidays. The word lists are as follows:

Lesson 7

which	sure
that	sugar
than	watch
this	hatch
both	chess
whole	patch
catch	whale
check	thick
match	whom
reach	smooth

/tch/th/wh/ch/

Lesson 8

bring	flame
front	speak
glass	clay
class	brick
friend	stove
spell	September
trick	October
stick	November
stamp	December

/fr/br/tr/st/fl/cl/
/gl/sp/

Lesson 9

three	splash
strong	scheme
spring	strike
school	scrub
street	splendid
throw	spray
string	throne
split	January
screen	February

/sch/thr/str/scr/
/spr/spl/

Lesson 10

page	orange
change	fudge
edge	cage
large	badge
age	danger
bridge	jacket
jar	lodge
stage	March
jail	April

(g spells J)

Lesson 11

since	seat
place	grass
less	twice
seen	pace
space	mess
pass	May
pencil	June
ice	July
sorry	August

Consonant Sound c
(c,s,ss)

Lesson 12

front	place
spell	screen
catch	glass
whole	bring
that	splash
jar	spring
school	which
three	bridge
large	less
trick	street
seen	check
both	class

Lesson Review

Lesson 13

part	fare
before	pork
short	pair
care	pear
air	stork
store	fork
bear	shark
hair	scarf
arm	door
wear	floor

Vowel Sound
(ar,ar,or)

Lesson 14

heard	fern
person	dirt
earth	pearl
circle	curve
learn	every
shirt	world
bird	they
burn	though
curl	through
curb	threw

Vowel Sound
(er,ear,ir,er,ur)

Lesson 15

always	ought
because	thought
call	fawn
draw	salt
saw	auto
caught	claw
raw	went
taught	were
law	we're
awful	where

Vowel Sound (o)

Lesson 16

sound	touch
house	young
ground	eyebrows
town	scoutmaster
power	flowerpot
south	southbound
loud	nightgown
cloud	mousetrap
cow	wear
pound	their

/ou/ (ou,ow)

These lists have been taken from the Rand McNally Spelling Series.

Some commonly-misspelled words have been added.

APPENDIX F

SPELLING CHECKLIST

Grade 3

Teacher's Name: _____ Week of: _____

Child's Name	Spelling Scores	
	Pretest	Post-Test
1.		
2.		
3.		
4.		
5.		

APPENDIX G

TEACHER POST-SURVEY

This survey, which includes the writer, was taken by the three teachers who were directly involved in the ten-week project.

1. Do you think the software "Guess That Word" (1982) helped those students who used it? Explain.

   Teacher I: Yes, those students who used the computer took more interest in spelling. It seemed to help students who were visual and kinesthetic learners greatly.

   Teacher II: Yes, those students acted more interested in their spelling proficiency and improved on test scores.

   Teacher III: Yes, I saw substantial improvement in their weekly test scores.

2. Do you think ten minutes using the computer was sufficient time? Explain.

   Teacher I: No, it seemed students had just started when it was time for another student's turn.

   Teacher II: Yes and no--it depends on each individual student. Maybe 15 to 20 minutes would have been a better time for all.

   Teacher III: No, I think the progress of the pupils would have been even greater if the time had been extended longer.

3. Did the students like to use the software "Guess That Word" (1982) to learn their spelling words? Explain.

   Teacher I: Yes, it was a different learning experience for them, and it seemed to maintain their interest.

   Teacher II: Yes, I have found a general fascination with computers, not just to "play games," but even to learn.

   Teacher III: Yes, the children were eager to work with the computer. They found it to be a fun game as well as a learning experience.

4. Did the computer help save time in spelling instruction? Explain.

   Teacher I: Yes, it saved time on individualized assistance.

   Teacher II: Yes, for those students using the computer, I spent less time on individual help, and their improved knowledge helped those around them.

   Teacher III: Yes, the pupils were able to follow the instructions with little aid from the teacher.

5. Once the students and you became proficient at using the software, did it become a good teaching tool? Explain.

   Teacher I: Yes, it provided another outlet to develop further interest and proficiency in spelling.

   Teacher II: Yes, a good teaching tool is one the kids "want" to use and one that provides improvement. This did.

   Teacher III: Yes, it was helpful, and progress was made.

6. Would you use the software "Guess That Word" (1982) again? Explain.

   Teacher I: Yes, it was a highly-motivational teaching aid, and it helped students learn their spelling words.

   Teacher II: Yes, my class experienced success with "Guess That Word," so I'd definitely use a successful tool again.

   Teacher III: Yes, I saw good progress in the pupils.

7. Would you advise others to use the software "Guess That Word" (1982)?

   Teacher I: Yes, I think it is a time-saving teaching tool.

   Teacher II: Yes, it can be a successful tool in a class if implemented correctly.

   Teacher III: Yes, I believe the software is a good teaching tool.

8. Were the materials in this project adequate? Explain.

   Teacher I: Yes, all the paperwork for record-keeping and the software were adeuate.

   Teacher II: Yes, the software and record sheets were adequate for completing the project.

   Teacher III: Yes, the materials covered the necessary skills.

9. Did the materials meet the needs of the students involved in the ten-week project? Explain.

   Teacher I: Yes, the materials were sufficient for those students involved in the project.

   Teacher II: Yes, again as previously stated, I noticed overall improved test scores.

   Teacher III: Yes, the materials covered the needs of the students and were found to be very helpful.

10. Do you think a permanent computer in your room could help aid in spelling proficiency? Explain.

   Teacher I: Yes, it helps save valuable teaching time, and I have requested a permanent one.

   Teacher II: Yes, if it helped for ten weeks, then the long-term use of a permanent computer would definitely aid in spelling proficiency.

   Teacher III: Yes, the computer would be more accessible to pupils who need extra help.

11. If you had a permanent computer in your room, how much time would be spent with spelling proficiency? Explain.

   Teacher I: Class instruction time would be about 45 minutes. Individual computer use would be about fifteen minutes each.

   Teacher II: Total class instruction time would be approximately 30 minutes. Individual computer use would be approximately 20 minutes. I believe with the use of a computer full time, I would be able to cut down on "total" class instruction time.

   Teacher III: This would depend on the individual needs of the student.

12. Do you think lack of teacher instruction time may account for some lack in spelling proficiency? Explain.

   Teacher I: Yes, too much emphasis is being placed on reading, math, and science. All subjects, including spelling, need to be an integral part of instruction.

Teacher II: Yes, definitely--especially if it is not stressed in all academic areas, and there is not any computer or software to use for spelling proficiency reinforcement.

Teacher III: Yes, I do not think enough time is set aside for spelling.

13. Do you think too much emphasis is being placed on other subjects which may lead to the lack of proficiency in spelling? Explain.

Teacher I: Yes, as mentioned previously, too much emphasis is being placed on reading, math, and science. All subject areas need to be an integral part of the curriculum.

Teacher II: No, spelling proficiency just needs to be an integral part of all academics.

Teacher III: Yes, I think more time should be spent on spelling. It would help other subject area.

14. Do you think spelling instruction should begin in kidergarten rather than waiting until first grade? Explain.

Teacher I: Yes, if the students seem ready, why wait until first grade? Teachers can introduce spelling as a game to make it fun.

Teacher II: Yes, a lot of children today are ready for a beginning spelling program in kidergarten. I would not see having it for report card grades, but the students could still be exposed to words, memorization, phonics, tests, etc.

Teacher III: Yes, I feel that a few basic skills should be introduced in kindergarten.

15. How would you rate this entire ten-week project? Explain.

Teacher I: I thought it was very successful, and the students' spelling scores improved greatly. I thought the computer was a helpful aid in spelling.

Teacher II: It was a good project which turned out to be quite beneficial to the students in my classroom.

Teacher III: I would rate the ten-week project as very good. I saw great improvement in the pupils' test scores, as well as their eagerness to learn.

END

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